

DEVELOPMENT OF AN ELECTRIC VEHICLE (EV) INFRASTRUCTURE PLAN FOR DELAWARE

Working Group Meeting #1

June 29, 2022

Agenda

- Introductions
- Background
- Existing EV Policy and Programs
- Why is an EV Infrastructure Plan Important?
- What is an EV Infrastructure Plan?
- Role of the Working Group
- Possible Plan Visions and Goals
- Existing Conditions
- Charging Location Analysis
- Next Steps



Introductions



Introductions

- DeIDOT – Transportation Resiliency & Sustainability
 - Jim Pappas, PE
 - Stephanie Johnson
- DNREC – Division of Climate, Coastal and Energy Climate, and Sustainability
 - Susan Love, AICP
 - Breanne Preisen
 - Brian Anderson
- AECOM
 - Joe Hofstee, PE
 - Dana AlQadi, D.Eng, PE
 - Margaret Quinn
 - Emily Thomas



Introductions – Invited Working Group Organizations

- DNREC, Clean Transportation
- DNREC, Energy Office
- DeIDOT, TR&S
- DeIDOT, DART
- Delaware Commute Solutions
- Delaware Electric Vehicle Association (DEEVA)
- Wilmington Area Planning Council (WILMAPCO)
- Dover/Kent County MPO
- Salisbury/Wicomico MPO (S/WMPO)
- Delaware Electric Coop (DEC)
- Exelon/Delmarva Power
- Delaware League of Local Governments (DLLG)
- Delaware Municipal Electric Corporation (DEMEC)
- Chamber of Commerce
- Office of State Planning Coordination
- La Ezperanza
- First State Community Action Agency
- Latin American Community Center
- League of Women Voters, Transportation Committee
- Healthy Communities DE
- Imani Energy, Inc.
- Delaware Concerned Residents for Environmental Justice
- NAACP

Background





The EV Infrastructure Plan helps implement Delaware's Climate Action Plan

Delaware's Climate Action Plan guides state efforts to minimize greenhouse gas emissions and maximize resilience to climate change impacts.

The Climate Action Plan was created to:

- Help Delaware meet its emissions reduction goal (26-28% from 2005 levels by 2025).
- Integrate emissions reduction and climate change adaptation actions.
- Set a course for state climate action in the decades ahead.



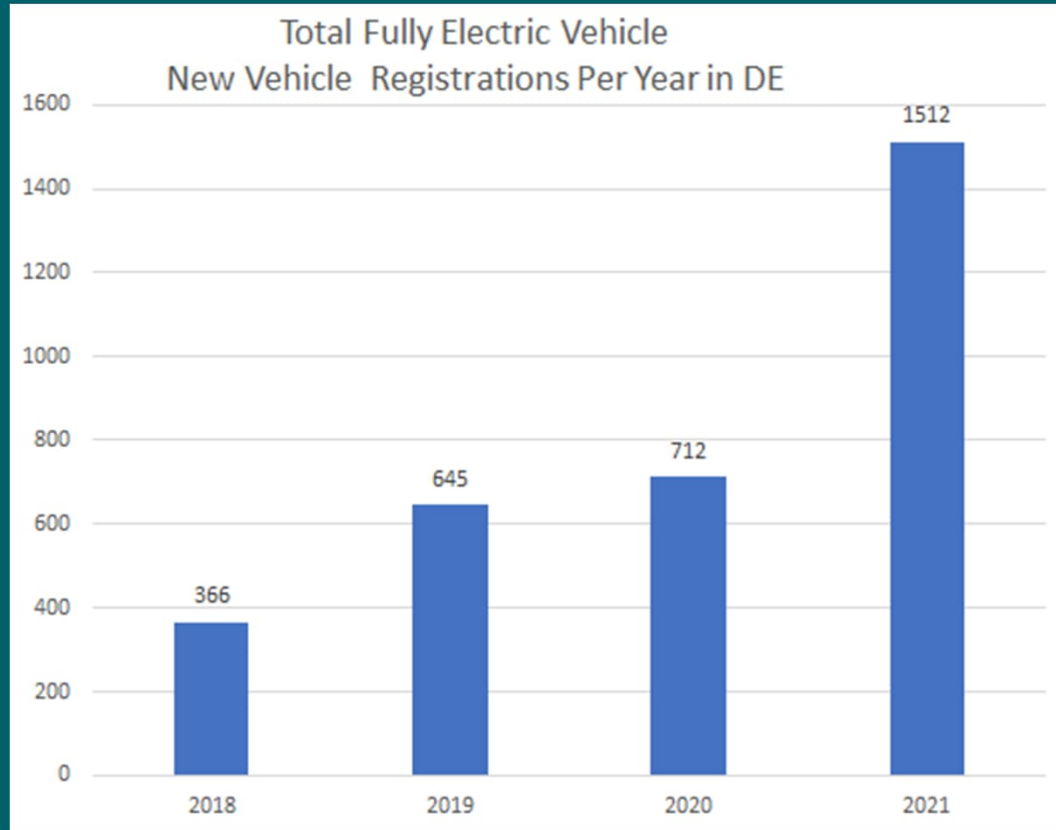
Specifically, the EV Infrastructure Plan will help inform these CAP strategies:

- Expand EV Charging
- Ensure EVs contribute to grid stability
- Capitalize on EV Transition to Stimulate Economy and Create Jobs
- Strengthen consumer adoption of EVs

www.de.gov/climateplan



Our Vehicular Future is Electric



DE DMV Data – May 8, 2022

- Climate Action Plan envisions 17,000 new EVs sold each year by 2030
- Governor Carney announced that DE will move to adopt Zero Emission Vehicle regulations
- Volvo, VW, GM, Toyota, Daimler/Mercedes and others pledge to be all electric by 2030/2035

EV and EV Charging Station Programs have accelerated DE's transition:

- Pilot infrastructure DNREC/OMB
- Clean Transportation Incentive Program
- Consumer Rebates for EV Purchase/Lease
- Business Rebates for Level 2 EV Charging Stations
- DNREC Clean Transportation Grant Program 2016 funded 5 DC-FC stations in Kent and Sussex, and others
- 2022 DC Fast Charging grant program in final selection phases – announcements this fall
- Variety of Education and Outreach efforts
- Partnership with state agencies to deploy charging stations
- Upcoming statewide attitudes and perceptions survey with UD



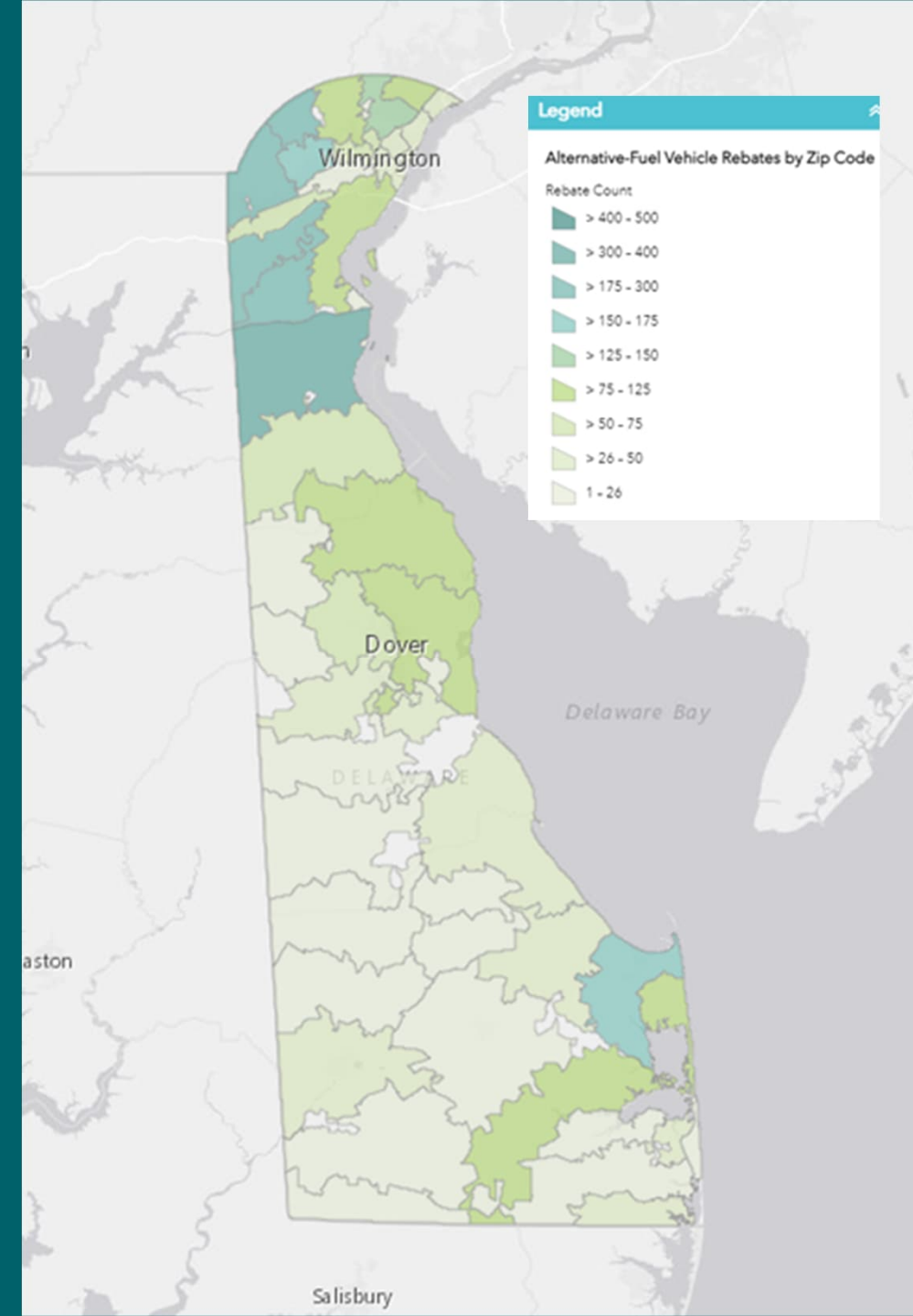
EV and EV Charging Station Policy Setting helps create predictability and consistency

- DE LEV regulations are effective 2014
- Public Service Commission Order (2019) clarifies that charging station operators are not a utility or electricity supplier
- SB 21 (2021) – allows state agencies to charge a fee at state owned charging stations
- SB 187 (2022) – Requires large municipalities to create a permitting process to install curbside charging
- New Castle County adopts ordinance requiring EV charging readiness in new construction (effective July 1, 2022).



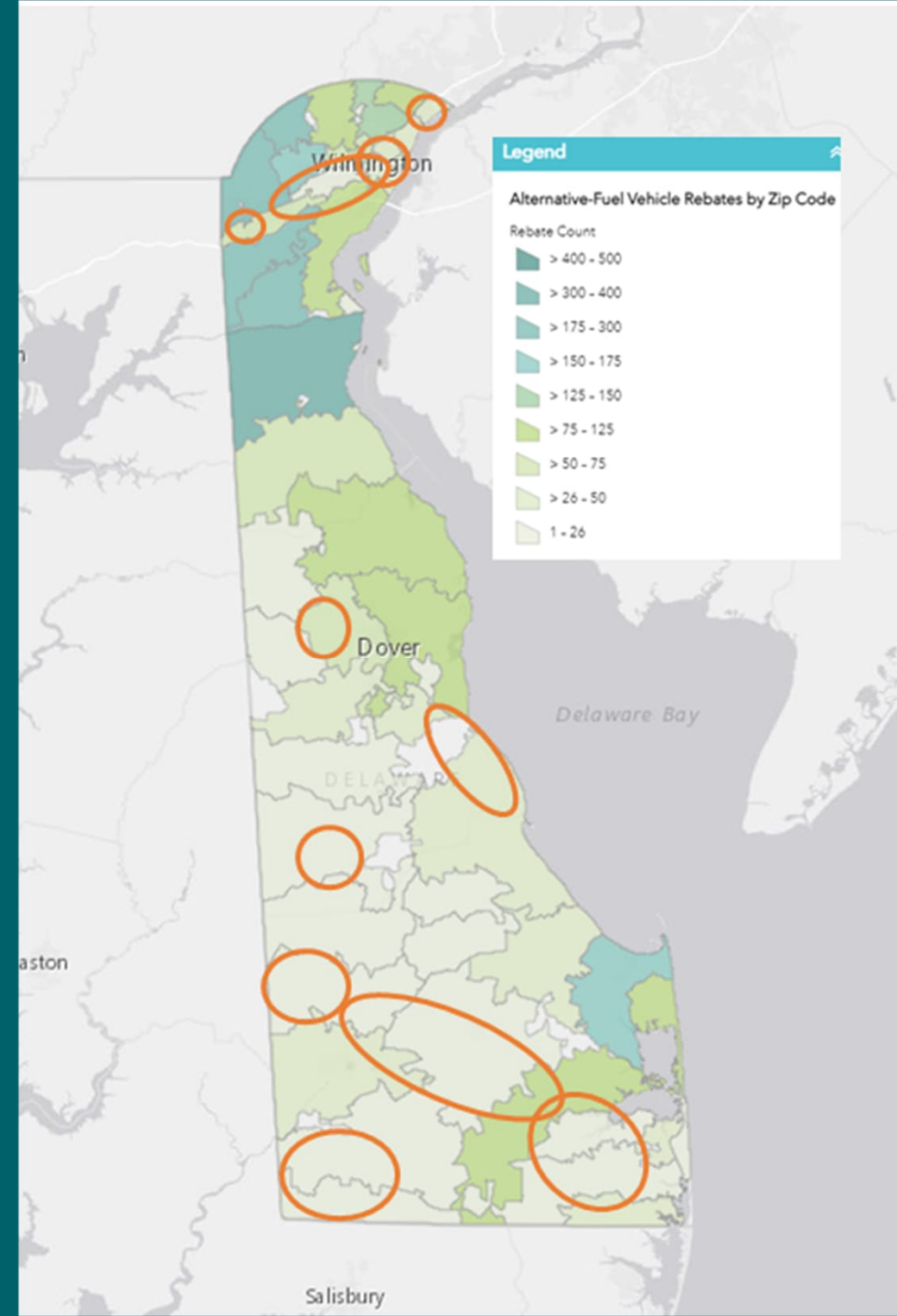
Why a statewide infrastructure plan now?

- Delaware does not have adequate infrastructure to support existing EVs
- Nearing EV price-parity and market penetration
- Facilitates coordination with technical experts
- Provides opportunity for engagement with communities
- Allows assessment of comprehensive charging needs – DC Fast and Level 2
- En-route fast charging
- Workplace
- Downtown/curbside
- Multi-family and single-family
- Multiple funding opportunities



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What is an EV Infrastructure Plan?

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- The main goal of an EV Infrastructure Plan is to evaluate and identify the future charging infrastructure needs in Delaware.
- Special focus will be paid to:
 - Disadvantaged Communities (DAC)
 - Rural Areas
 - Residents of multi-unit dwellings
- Incorporates the following:
 - Existing conditions & data collection
 - Modeling future conditions
 - Public outreach & stakeholder engagement
 - Virtual Meeting Room
 - <https://deldot.gov/Programs/NEVI/>
- The Statewide EV Infrastructure Plan will seek to:
 - Provide a high-level indication of the scale and geographic scope of EV charging infrastructure required to support the transition to EVs in Delaware.
 - Provide a strategic framework for prioritizing areas of the greatest EV charging needs based on data and modeling, focusing on equitable deployment of electric vehicle supply equipment (EVSE).
 - Provide projections of the types of EVSE needed.
 - Provide recommendations on how to best utilize funding opportunities to implement the Statewide EV Infrastructure Plan.

What is an EV Infrastructure Plan?

NEVI EV Plan Framework/Sections

- Intro
- State Agency Coordination
- Public Engagement
- Plan Vision and Goals
- Contracting
- Existing and Future Condition Analysis
- EV Charging Infrastructure Deployment
- Implementation
- Civil Rights
- Equity Considerations
- Labor and Workforce Considerations
- Cybersecurity
- Program Evaluations
- Discretionary Exceptions (if any)

Role of the Working Group



Role of the Working Group

Consult

Consult with DeIDOT and DNREC to guide EV infrastructure plan development

Advise

Advise DeIDOT and DNREC on perspectives from your organization and/or industry

Share

Share public engagement opportunities with your communities (and/or customers) and networks



Role of the Working Group (cont.)

- Meet 4 times
- At key milestones for the Statewide EV Infrastructure Plan
 - Existing Conditions & Plan Vision and Goals (today)
 - Future Conditions
 - Plan Strategies & Recommendations (Session #1)
 - Plan Strategies & Recommendations (Session #2)



Possible Plan Vision and Goals

Possible Plan Vision

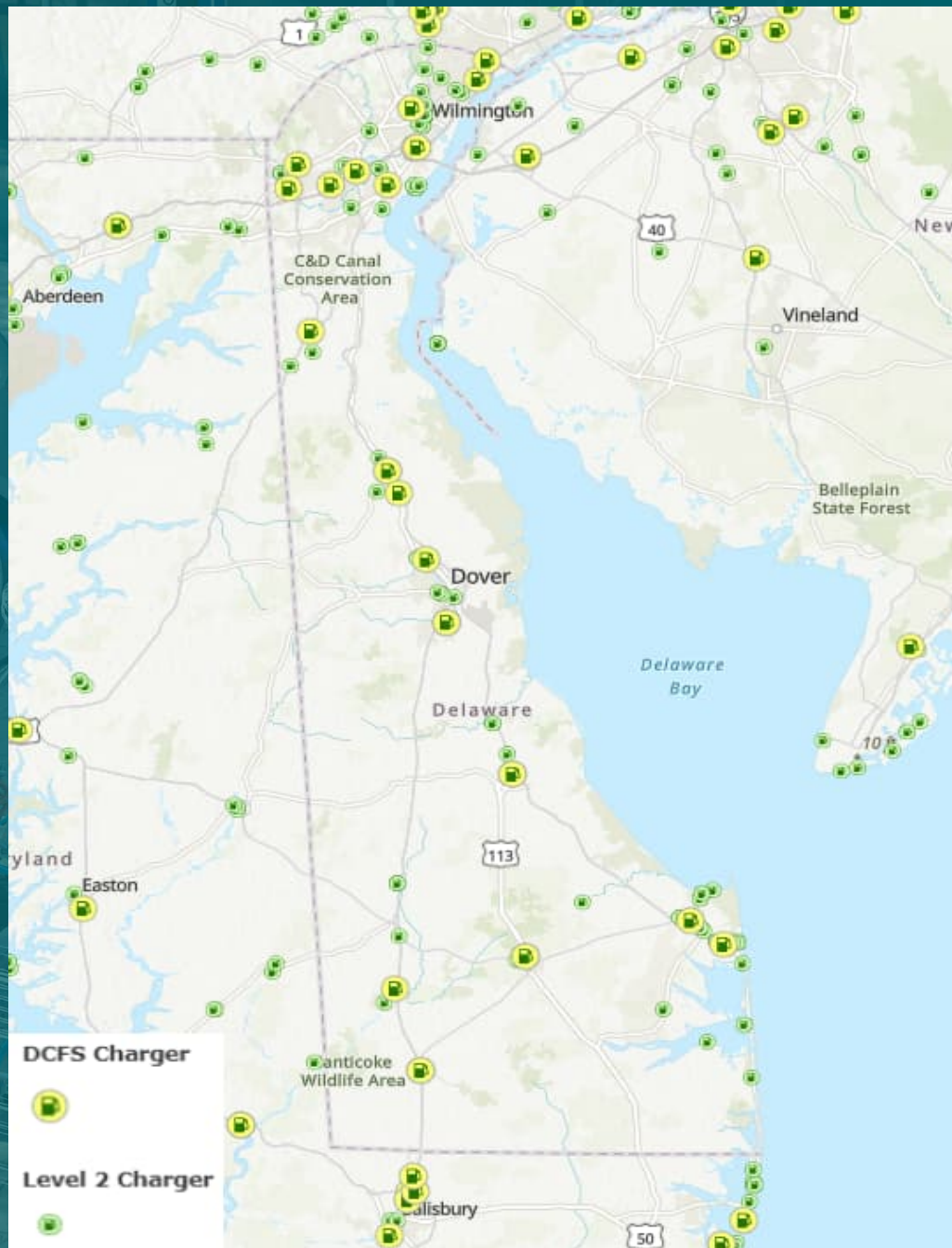
Enable current and future drivers of electric vehicles to confidently travel in and across Delaware for work, recreation, and exploration.

Feedback or Ideas from the Working Group: ?

Possible Plan Goals – Your Feedback or Ideas?

- *Equity*: ensure that rural, underserved, and disadvantaged communities and stakeholders, including relevant suppliers and contractors, are engaged and realize plan benefits
- *Reliability*: develop a reliable, convenient, affordable, and equitable EV infrastructure network in Delaware for all users
- *Connections*: connect Delawareans and travelers in Delaware to EV charging in an electric transportation future
- *Education*: develop outreach materials on electric vehicles, good charging habits, station location, station usage, equipment capability, and how to provide feedback on the network; use social media and Apps
- *Evaluation*: develop a framework to collect data and evaluate the plan

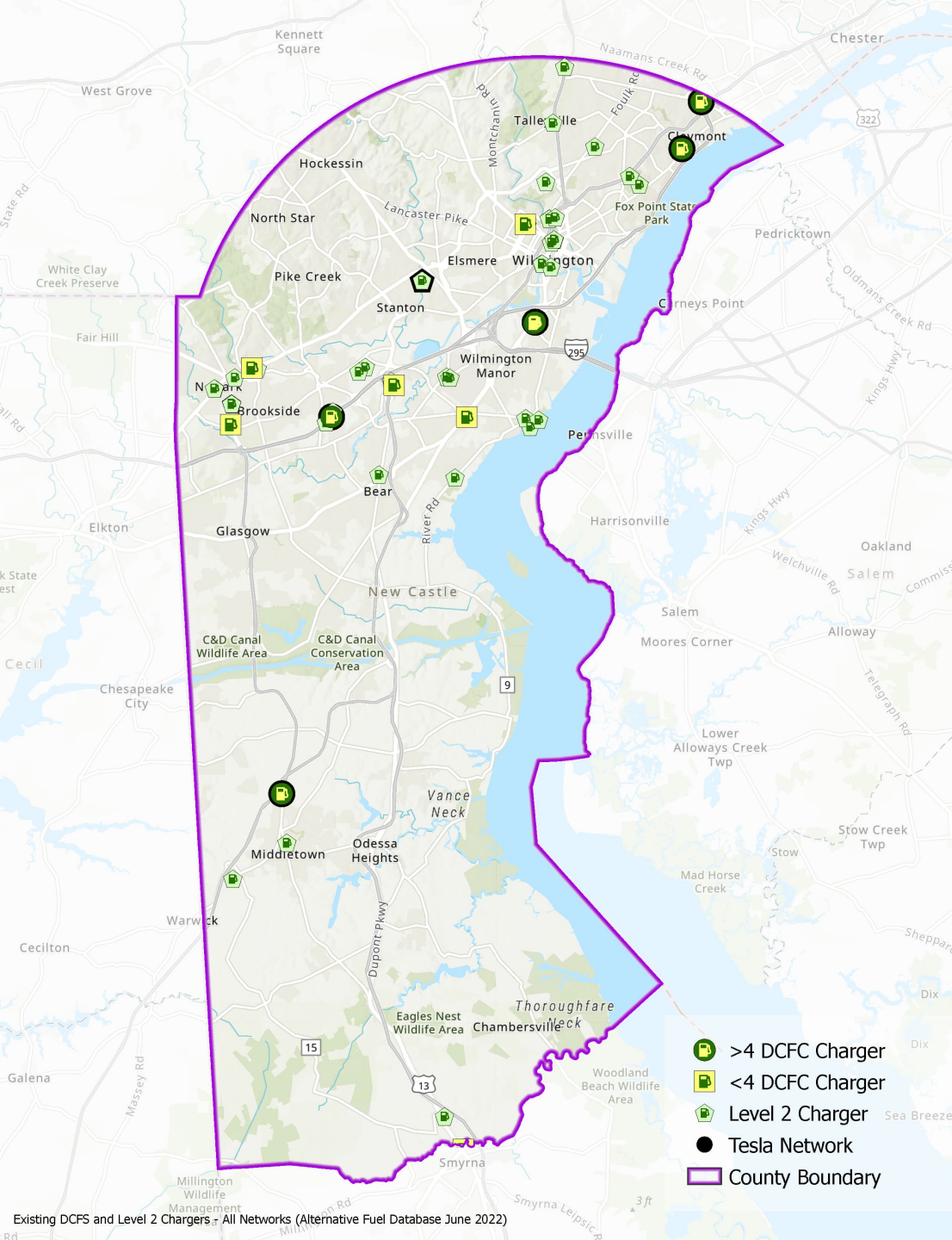
Existing Conditions



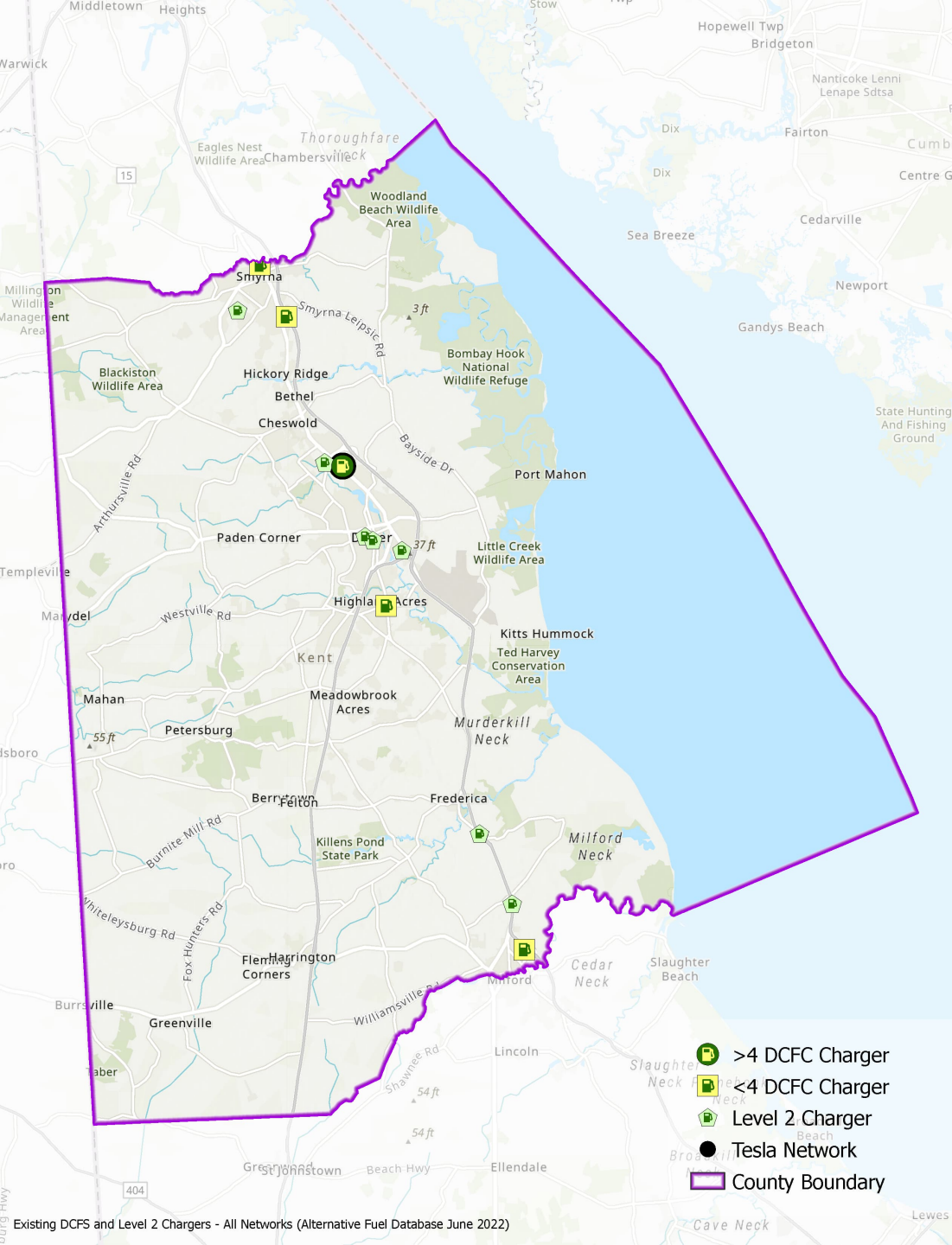
Existing Charging Infrastructure

- 25 DCFC locations, 97 ports
- 108 Level 2 locations, 229 ports

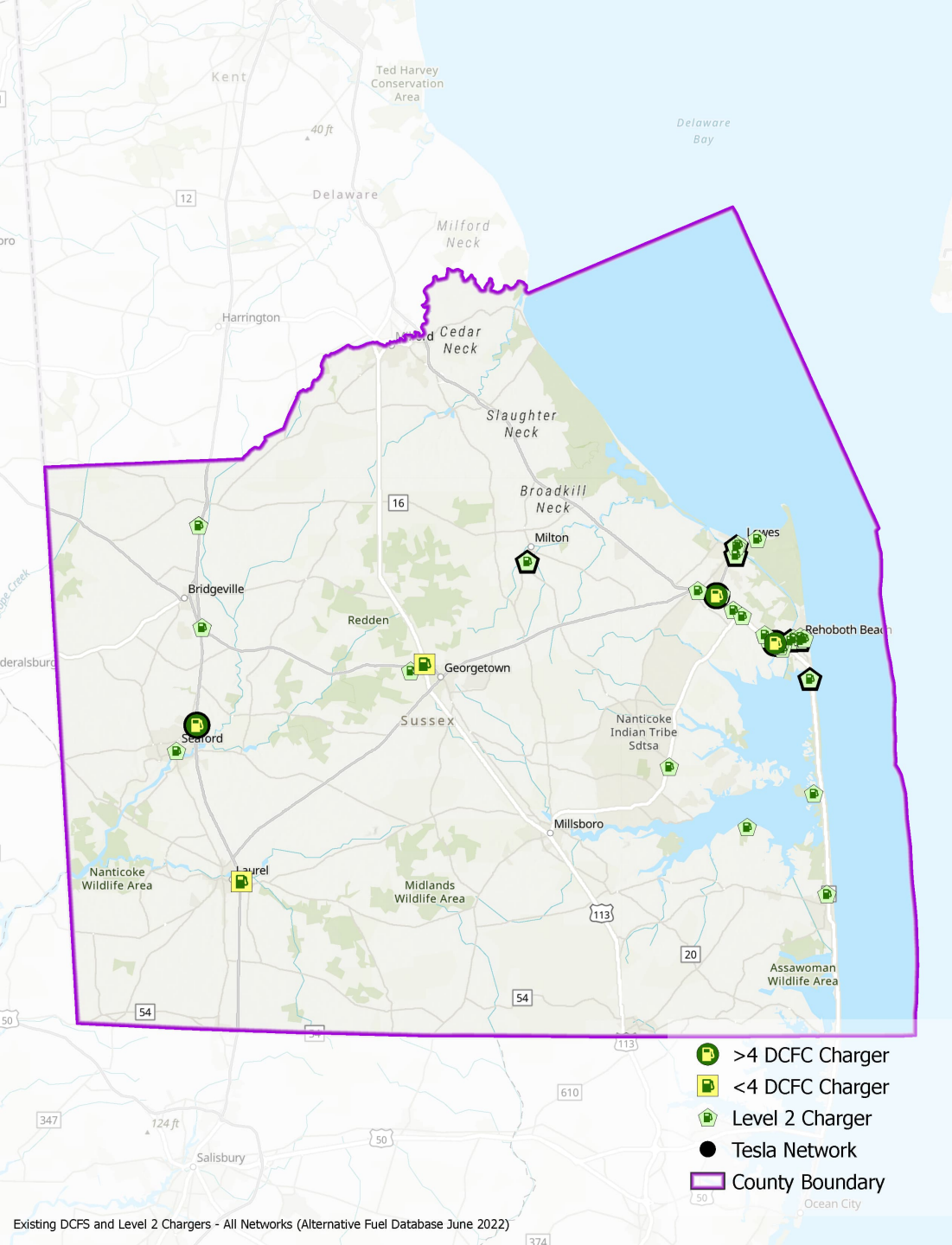
New Castle County Existing Network



Kent County Existing Network



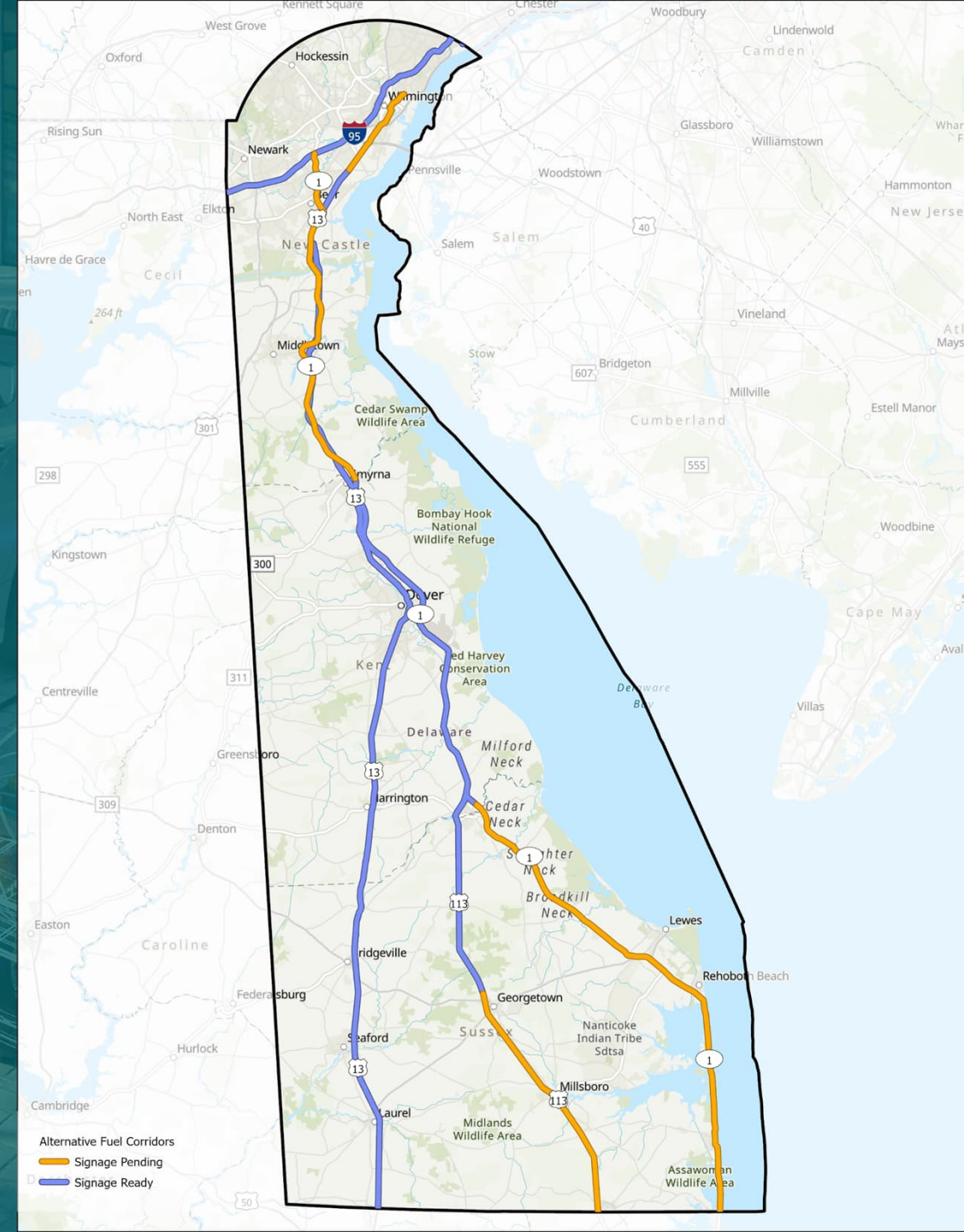
Sussex County Existing Network



Existing Conditions: Alternative Fuel Corridors (AFC)

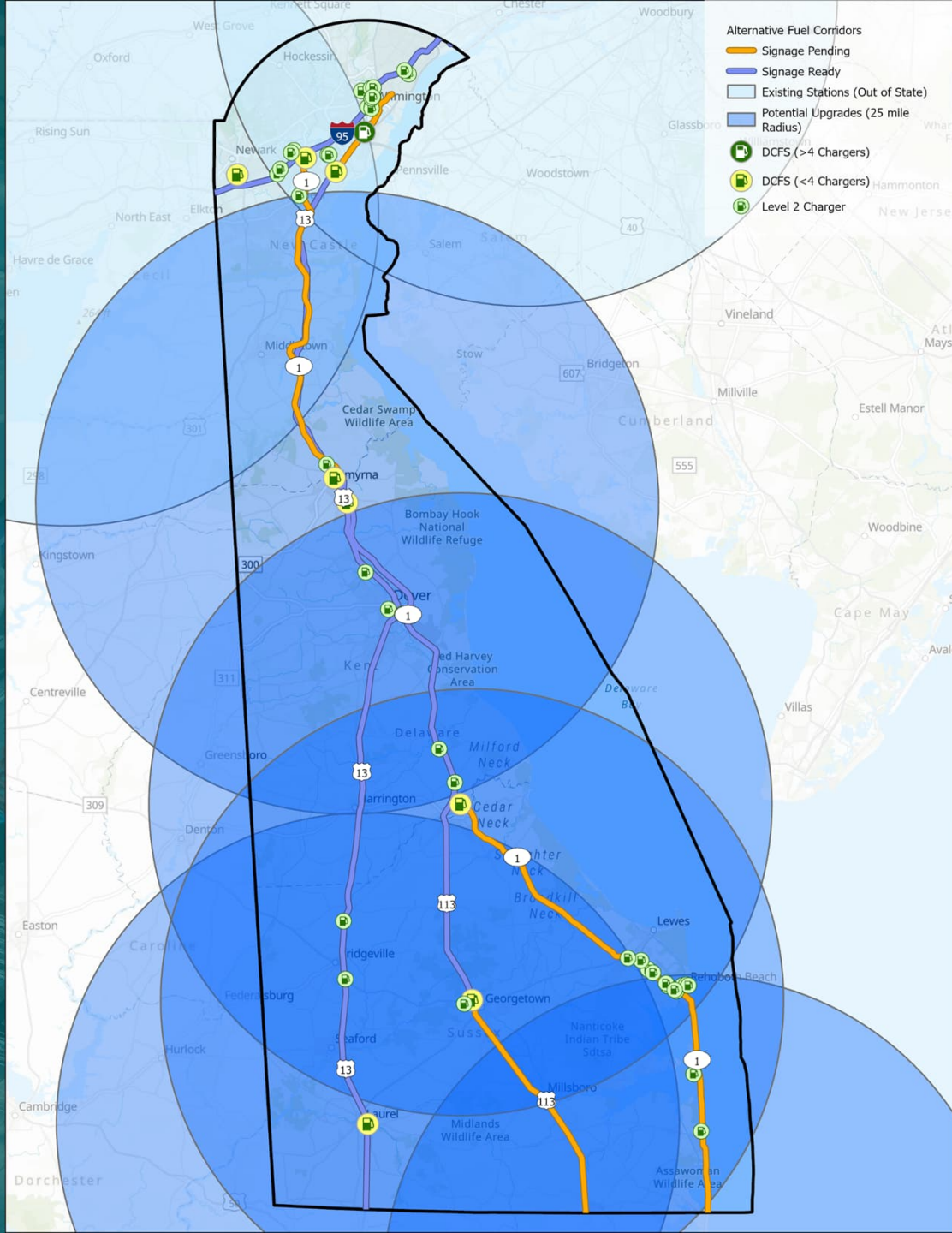
■ AFC Routes:

- I-95
- I-295
- DE-1
- US-13
- US-113



Charging Location Analysis



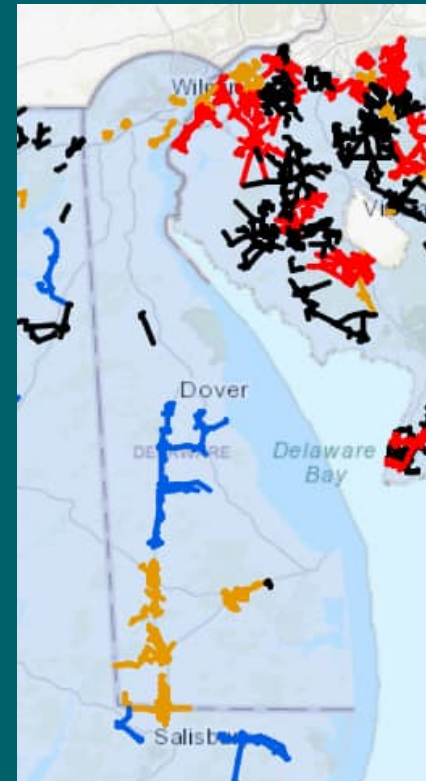


Potential to Meet NEVI Guidelines

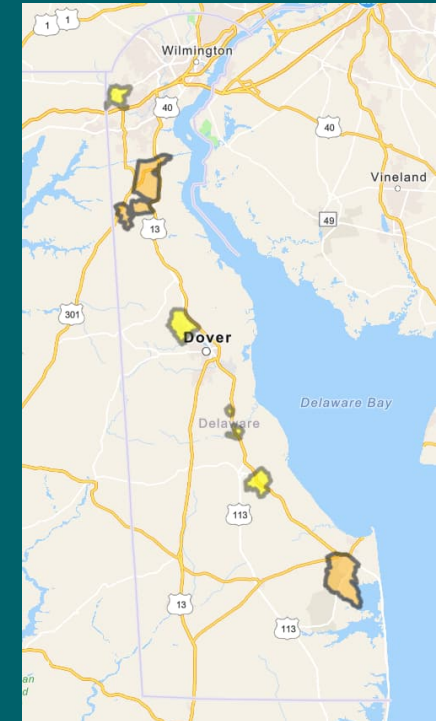
- DCFC sites that more than 1-mile off corridor or Tesla chargers were filtered out of the map
- Placed 25-mile radius circles on these sites to identify gaps. It is assumed that these locations would be upgraded to meet NEVI requirements
- If these sites in Delaware and boarding state chargers were upgraded, no additionally charging sites may be needed

Potential to Expand Network

- Potential new sites
 - Traffic and Intersections
 - Existing EV charging infrastructure
 - Societal Demographics (income, education, etc.)
 - Disadvantaged Community Traits
 - Zoning
 - Amenity and Destinations
 - Utility Capacity



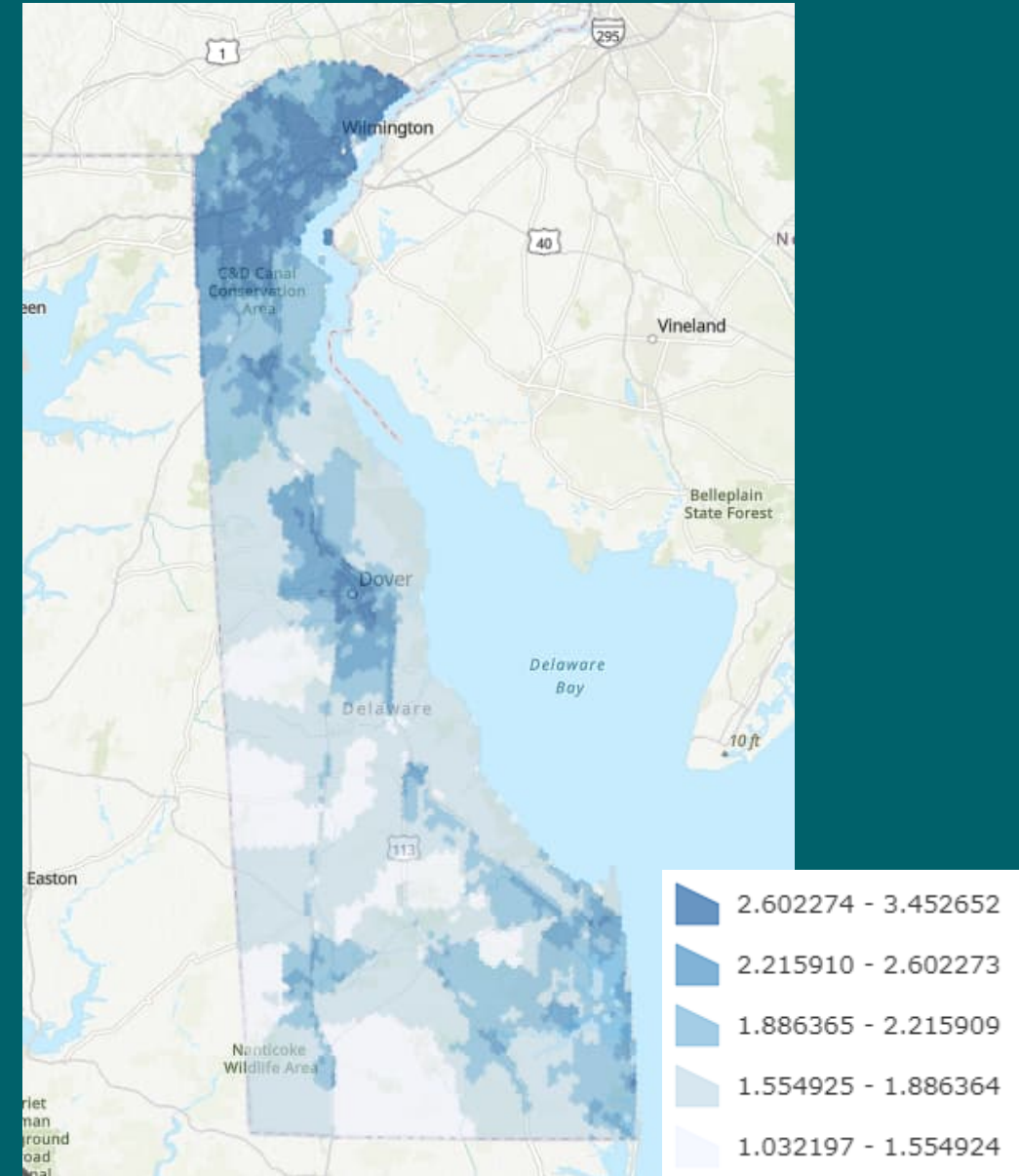
Hosting Capacity



Transit Improvement Districts

Potential to Expand Network

- The following criteria may be used to identify which sites should be prioritized for charger installations or revise proposed locations:
 - Justice 40 Designation
 - Traffic Count
 - Amenity Count
 - Route
 - Network Connections
 - Utility Capacity
 - Cost
 - County Distribution
 - Others

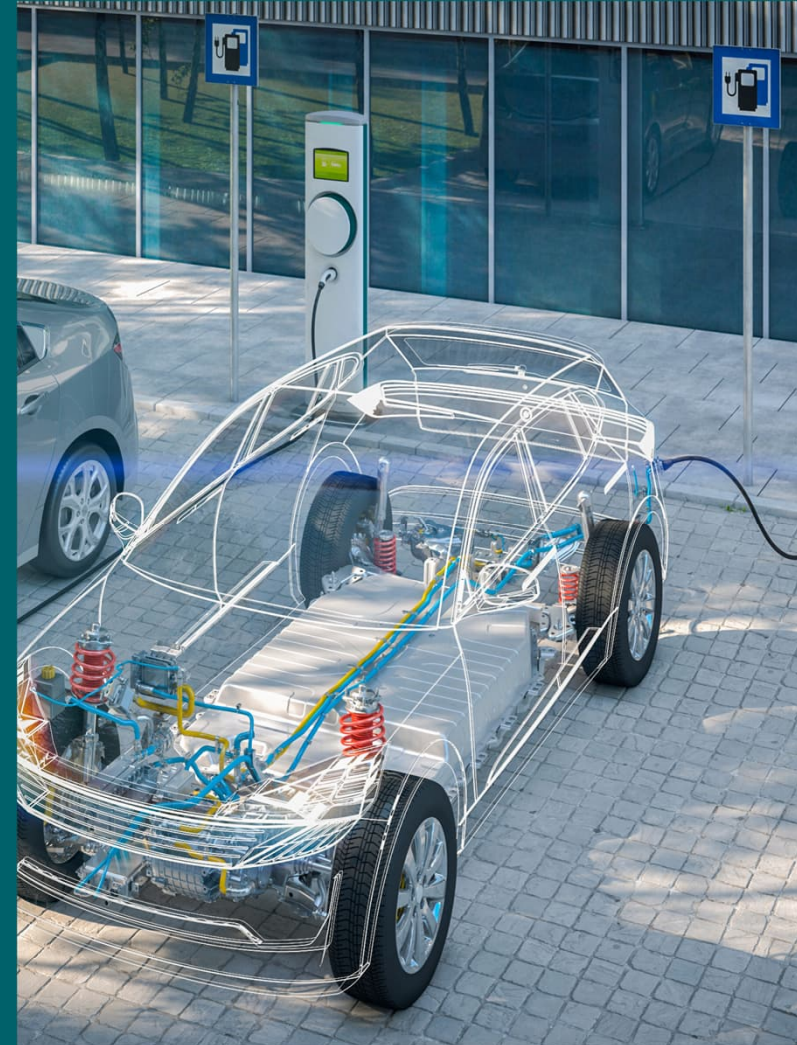


Next Steps



Next Steps

- Public Workshop
 - Introduction to EV Plan
 - Why It Matters
 - Why Public
- Next Working Group Meeting Anticipated in September 2022
- Potential Topics For Next Meeting:
 - Future Conditions



Open Discussion and Q&A

Additional questions, comments,
and suggestions can be emailed
to evplan@delaware.gov